



Design Engineering Division (DED)

A Technical Division of ASME

Leadership Training Conference (LTC 2011) Products and Services

Division Vision and Mission

Vision Statement:

- To be an agile and engaged division of the Society that keeps abreast with rapid changes in knowledge, technology, and global and societal needs in the field of design engineering.

Mission Statement:

- To lead in fostering and promoting the art, science and application of design engineering as well as the professional careers of design engineers in education, research, and engineering practice.

Strategic Plan

- Designed to achieve DED's vision while fulfilling its mission by:
 - Ensuring that the division is evolving to respond to future changes and demographics
 - Maintaining leadership technically and technologically
 - Having a business model that would make the division evolve as a technical division as well as an enterprise
 - Maintaining a process of attracting young and diversified groups of members and volunteers

Division Demographics

DED is one of the largest divisions of ASME. For more than 10 years the division has maintained its membership of more than 30,000 individuals.

Target Audience

- Members
- Technical committees
- Design educators
- Design professionals and practicing engineers
- Students
- Industrial organizations and staff involved in design engineering
- Government organizations and staff involved in design engineering
- Codes and standards organizations and staff dealing with design engineering standards
- Engineers communicating technical issues to the public
- The general public utilizing engineered products and processes
- Historians and sociologists dealing with technology and society

Technical Committees

- Design Automation (DAC)
- Design for Manufacturing and Life Cycle Management (DFMLC)
- Design Theory & Methodology (DTM)
- Design Education (DEC)
- Fastening & Joining (F&J)
- Mechanisms & Robotics (M&R)
- Power Transmission & Gearing (PTG)
- Reliability, Stress Analysis & Failure Prevention (RSAFP)
- Vehicle Design (VDGN)
- Vibration & Sound (TCVS)
- Micro & Nano Systems (MNS)
- Multibody Systems & Nonlinear Dynamics (MSND)
- Mechatronic and Embedded Systems and Applications (MESA)

Conferences

- The division sponsors and organizes the annual *International Design Engineering Technical Conferences (IDETC)* each autumn which showcase advances in research on design related subjects. This umbrella conference has between 800-1200 participants each year and is currently the largest source of income for the division.
- The division also participates in the *International Mechanical Engineering Congress and Exhibition (IMECE)* – usually filling 25 to 30 sessions.

Publication Activities

Division's sponsored or co-sponsored publications include:

- Conference Proceedings* in the form of CD-ROM for division's annual *International Design Engineering Technical Conferences (IDETC)*
- ASME Journal of Mechanical Design (JMD)*
- ASME Journal of Vibrations & Acoustics (JVA)*
- ASME Journal of Computational & Nonlinear Dynamics*
- ASME Journal of Mechanisms and Robotics (JMR)*
- ASME Journal of Medical Devices* (jointly with Bio Eng Div)
- ASME Journal of Computing & Information Science in Engineering (JCISE)* (jointly by CIE-Comp Info Eng Div)

Products

Present Products:

- Technical conferences providing a forum for the exchange and/or documentation of technical information, enterprise issues, and practices of design engineering
- Technology conferences, exhibitions, and shows aimed at the practicing engineers and industrial sector
- Workshops and tutorials for focused information and technology transfer
- Archival journals for dissemination of long lasting knowledge
- Conference proceeding publications for rapid dissemination of knowledge
- Honors and awards recognizing outstanding contributions
- Training of students and engineers

Additional Products Under Consideration for Development:

- Codes and standards for design engineering practices
- Recruitment and retraining tools and workshops for practicing design engineers
- Standards and requirements for design engineering education (design education certification)
- Design Engineering Certification
- National Student Design Competition

Strengths and Weaknesses

Strengths:

- An enterprise model for a technical division with a well maintained revenue stream and a growth plan
- A division structure that attracts an exceptionally capable volunteer group
- Exceptional student development which includes oral and poster presentations as well as networking activities during the technical conferences
- Well recognized publications with both short term and archival values
- A well established and managed technical conference
- Well established and recognized set of honors and awards

Weaknesses:

- Participation of industrial members in technical activities and conferences needs improvement
- Better coordination is needed with other ASME divisions and units
- Methods to ensure organizational agility are needed
- Coordination and networking are lacking with standards, accreditation and registration organizations

Metrics of Performance

- Are important technical work, enterprise work, and innovations coming out of our activities?
- Are we covering other relevant important areas?
- Are we properly serving our members: academics, students, government employees, and practicing engineering community?
- Do we reach out to interdisciplinary areas by teaming within and outside engineering?
- Do we identify, recognize, and embrace new and evolving areas?
- Do the top people in the field remain involved with the activities of the division?
- Do our journals & conferences publish the most important developments in the field?
- Do our awards recognize the top developments and the leaders in the field?
- Are we developing the needed resources and the enterprise model to support and evolve our activities?